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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,454	04/24/2002	Michiel J. van Nieuwstadt	201-0830 AJL	6571

7590 01/25/2005
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EXAMINER

TRAN, DIEM T

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,454

Applicant(s)

VAN NIEUWSTADT ET AL.

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to the amendment filed on 10/14/04. In this amendment, claims 1, 5, 7, 8, 10 have been amended. Overall, claims 1-15 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 5, 6, 8, 10-12, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hardy (US Patent 4,835,963).

Regarding claims 1-4, Hardy discloses a method for regenerating a particulate filter (32) coupled to an exhaust system of an internal combustion engine (12) (see Figure 1), where the exhaust system terminates at a tailpipe, comprising:

commencing a self-sustaining filter regeneration, monitoring whether said regeneration causes temperature of said particulate filter to become greater than a predetermined value; and in response to said monitoring, adjusting one operating parameters so as to limit exothermic reaction via control of an excess oxygen amount entering said filter and prevent temperature from rising to become greater than a pre-selected value; and continuously flowing all exhaust emitted from the tailpipe through the particulate filter (see col. 4, 61-68, col. 5, lines 1+).

Regarding claims 5, 6, 8, 10-12, 15, Hardy discloses a method for operating an engine coupled to an exhaust system having a diesel particulate filter (32), where the exhaust system

terminates at a tailpipe; the engine having an electronically controlled throttle valve (74) that adjusts oxygen flow entering the engine, the method comprising:

detecting temperature indicative of said diesel particulate filter ; controlling air flow via the valve based on said detected temperature so as to prevent temperature of the diesel particulate filter from rising to a point that causes degradation due to excessive exothermic reaction, while continuing filter regeneration; and continuously flowing all the exhaust emitted from the tailpipe through the particulate filter (see col. 4, lines 14-31, col. 5, lines 34-45).

Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Arai (JP 64-087820).

Arai discloses a system comprising a diesel engine having an exhaust system; an exhaust gas oxygen sensor (30) coupled in said exhaust system; an electronically controlled throttle valve (31) coupled to said engine; a diesel particulate filter (3) coupled to said engine (see Figure 1); and a controller for commencing self-sustaining regeneration of said particulate filter, determining a desired oxygen flow, and adjusting said valve to provide said desired flow in response to said exhaust gas oxygen sensor (30) (see abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (JP 64-087820) as applied to claim 7 above, in view of Ludecke et al. (US Patent 4,211,075).

Arai discloses all the claimed limitations as discussed in claim 7 above, however, fails to disclose controlling particulate filter temperature based on engine speed and engine load.

Ludecke teaches that it is conventional in the art, to control particulate filter temperature based on engine speed and engine load (see col. 3, lines 57-68, col. 4, lines 1+).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Ludecke in the Arai method, since the use thereof would have improved the efficiency of the filter regeneration.

Claims 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardy (US Patent 4,835,963) as applied to claim 10 above, in view of Kondo et al. (US Patent 4,732,593).

Regarding claims 13, 14, Hardy discloses all the claimed limitations as discussed in claim 10 above; however, fails to disclose that said diesel particulate filter comprises SiC or cordierite.

Kondo teaches that it is conventional in the art, to utilize a diesel particulate filter comprising high temperature resistant SiC or cordierite (see col. 2, lines 67-68, col. 3, lines 1-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Kondo in the Hardy system since the use thereof would have produced a durable particulate filter.

Response to Arguments

Applicant's arguments filed on 10/14/04 have been fully considered but they are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Diem Tran
Patent Examiner
Art unit 3748

DT
January 18, 2005



THOMAS DENION
SUPERVISORY PATENT EXAMINER
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